

## **Amendment to the Claims**

Please amend claims 1 and 11 as shown in the following listing of claims. This listing of claims will replace all prior versions, and listings, of claims in the application.

- 1 1. (currently amended) A method of testing analogue or radio frequency  
2 circuitry for the presence of faults, the method comprising the steps of:  
3 a) applying a plurality of different DC power supply voltages to a  
4 circuit or component under test, at least one of said power supply voltages being  
5 arranged to cause at least some of the elements of the circuit or component under  
6 test to operate in a predetermined region of operation; and  
7 b) measuring the quiescent current of said circuit or component ~~as~~  
8 ~~a result of~~ after application of each of said power supply voltages to generate a  
9 current signature representative of the operation of said circuit or component;  
10 the method being characterized in that said power supply voltages  
11 at which said quiescent current measurements are taken comprise selected distinct  
12 voltages; and by the step of:  
13 c) comparing said generated current signature with a predetermined  
14 current signature representative of operation of a fault-free component or circuit  
15 so as to determine whether or not any faults are present in the component or  
16 circuit under test.
- 1 2. (original) A method according to claim 1, including the further step of  
2 measuring one or more selected nodal voltages, in addition to said quiescent  
3 current, as a result of application of said selected power supply voltages.
- 1 3. (original) A method according to claim 2, wherein said one or more nodal  
2 voltages are measured at one or more respective output nodes of said circuitry.
- 1 4. (previously presented) A method according to claim 1, including the step  
2 of providing a single supply voltage means and ramping said supply voltage up to

3     attain each of said selected power supply voltages, prior to measurement of the  
4     quiescent current.

1     5.       (previously presented) A method according to claim 1, wherein the  
2     selected power supply voltages are selected so as to cause at least some of the  
3     elements of the circuitry under test to pass through several regions of operation.

1     6.       (previously presented) A method according to claim 1, wherein a fault  
2     dictionary database is provided, and the method includes the further step of  
3     comparing a generated current signature with contents of such a database to  
4     diagnose one or more faults present in the circuitry under test.

1     7.       (previously presented) A method according to claim 1, wherein a  
2     tolerance window is defined for the resultant quiescent current measurements for  
3     at least one of the selected power supply voltages.

1     8.       (original) A method according to claim 7, wherein a tolerance window is  
2     defined for the resultant quiescent current measurements for all of the selected  
3     power supply voltages.

1     9.       (previously presented) A record carrier on which is stored a computer  
2     program for enabling the method of claim 1 to be performed.

1     10.      (previously presented) A method of testing analogue or radio frequency  
2     circuitry, including the step of making available for downloading a computer  
3     program for enabling the method of claim 1 to be performed.

1     11.      (currently amended) Apparatus for testing analogue or radio frequency  
2     circuitry for the presence of faults, the apparatus comprising:

3                 a) means for applying a plurality of different DC power supply  
4     voltages to a circuit or component under test, at least one of said power supply  
5     voltages being arranged to cause at least some of the elements of the circuit or  
6     component under test to operate in a predetermined region of operation; and

7                   b) means for measuring the quiescent current of said circuit or  
8   component ~~as a result of~~ after application of each of said power supply voltages to  
9   generate a current signature representative of the operation of said circuit or  
10   component;

11                   the apparatus being characterized in that said power supply  
12   voltages comprise selected distinct voltages; and by:

13                   c) means for comparing said generated current signature with a  
14   predetermined current signature representative of operation of a fault-free  
15   component or circuit so as to determine whether or not any faults are present in  
16   the component or circuit under test.

1   12.    (previously amended) A method according to claim 1, wherein the  
2   different DC power supply voltages are selected to cause at least some of the  
3   elements of the circuit or component under test to pass through subthreshold,  
4   linear and saturation operating regions.